Headquarters U.S. Air Force

Integrity - Service - Excellence

GeoBase *and* Ranges

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HQ AFCEE/EC

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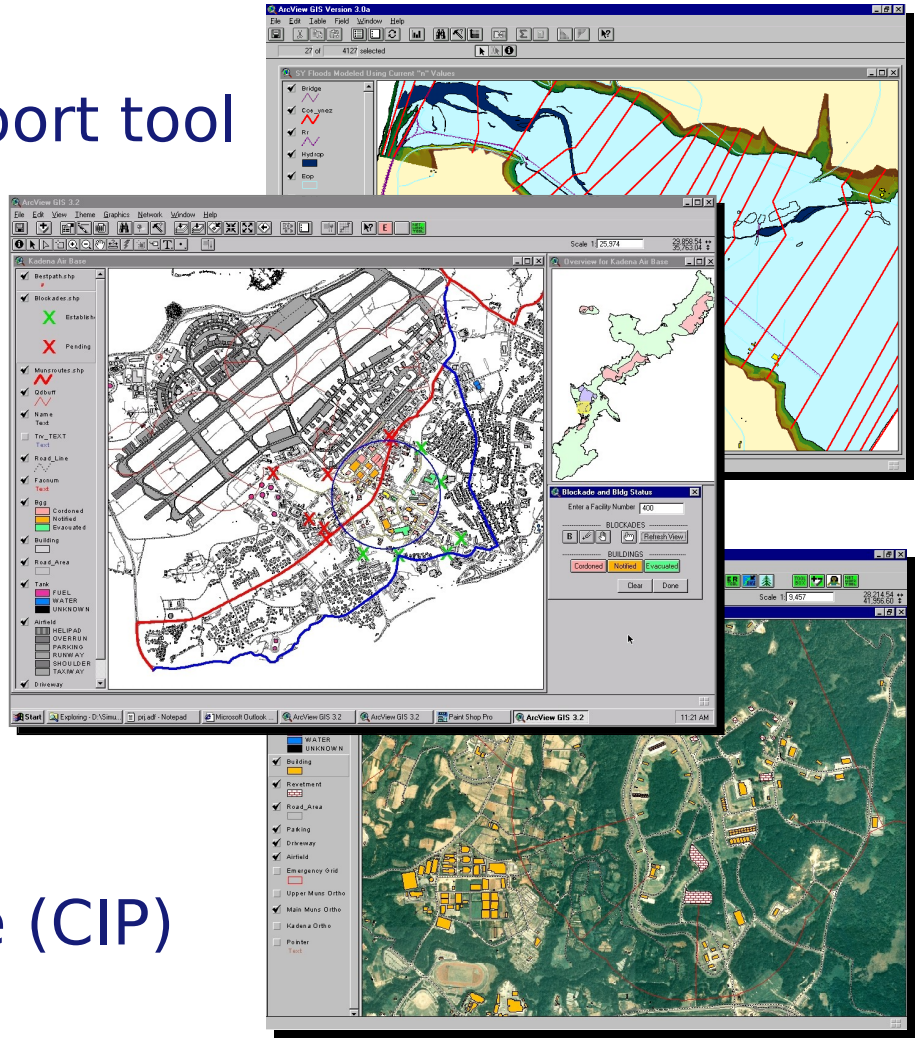
What is GeoBase ?

- Commander’s decision support tool
  - Elevates access & visibility
- Situational awareness
  - Crisis and routine situations
- Common Installation Picture (CIP)
  - One base – one smart map



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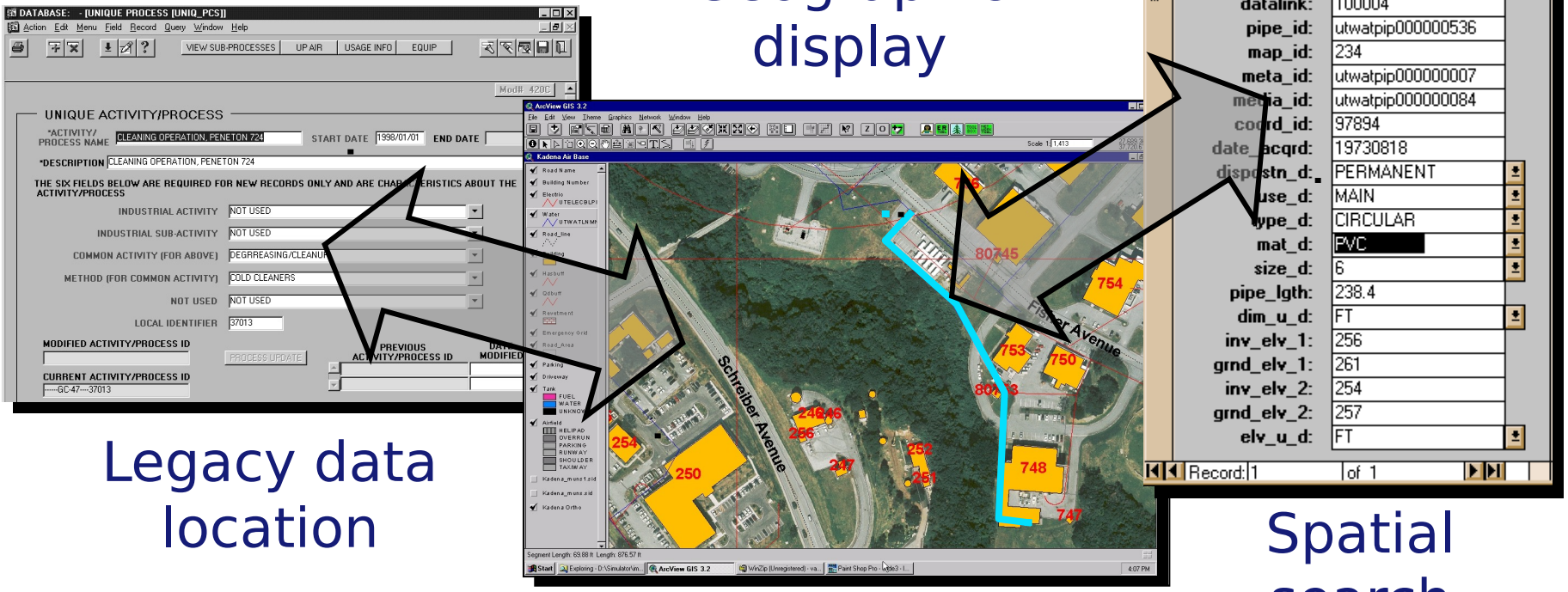
GeoBase Enables

Geographic display



Legacy data location

Spatial search

Georeference features *to* the CIP

Locate features *from* the CIP

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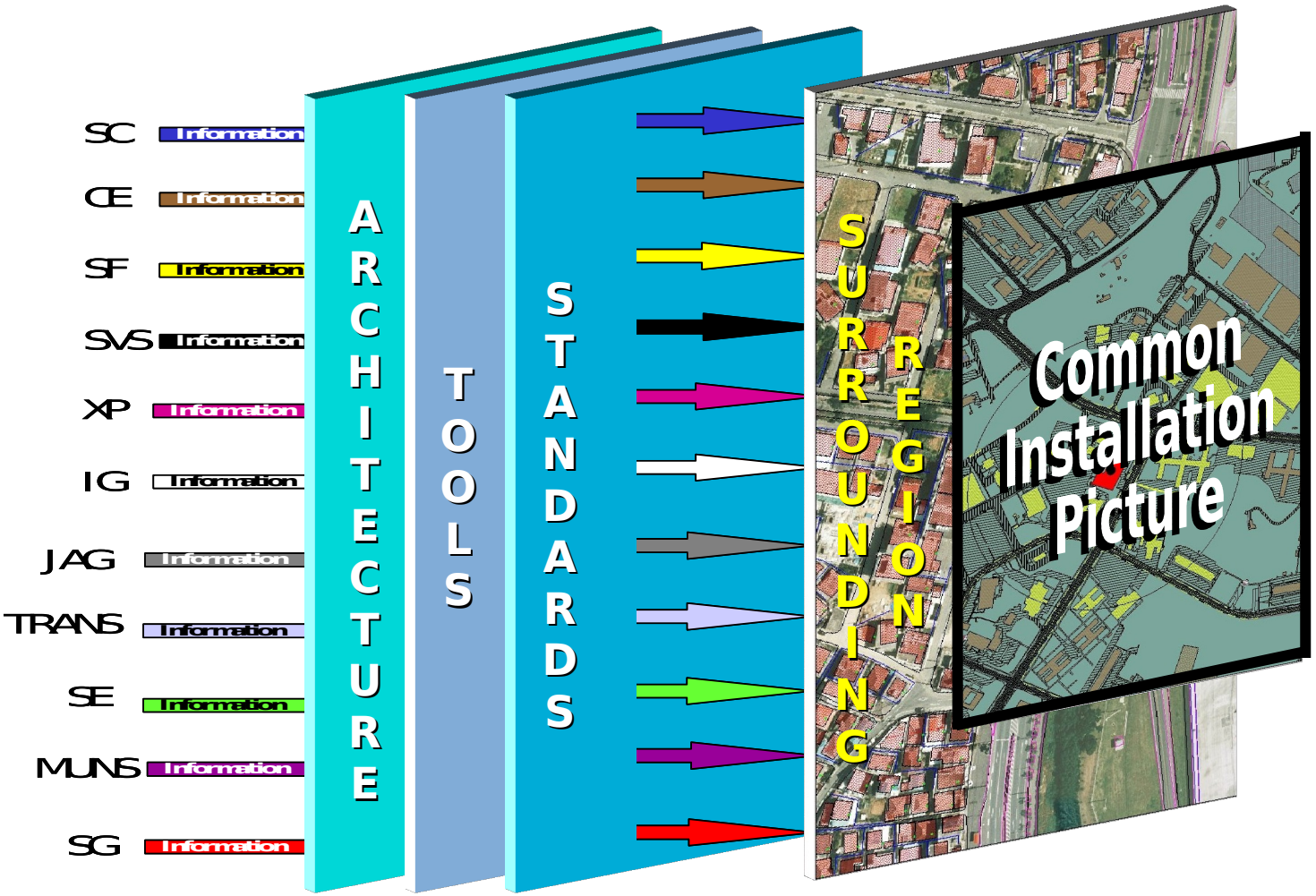
GeoBase Integrates



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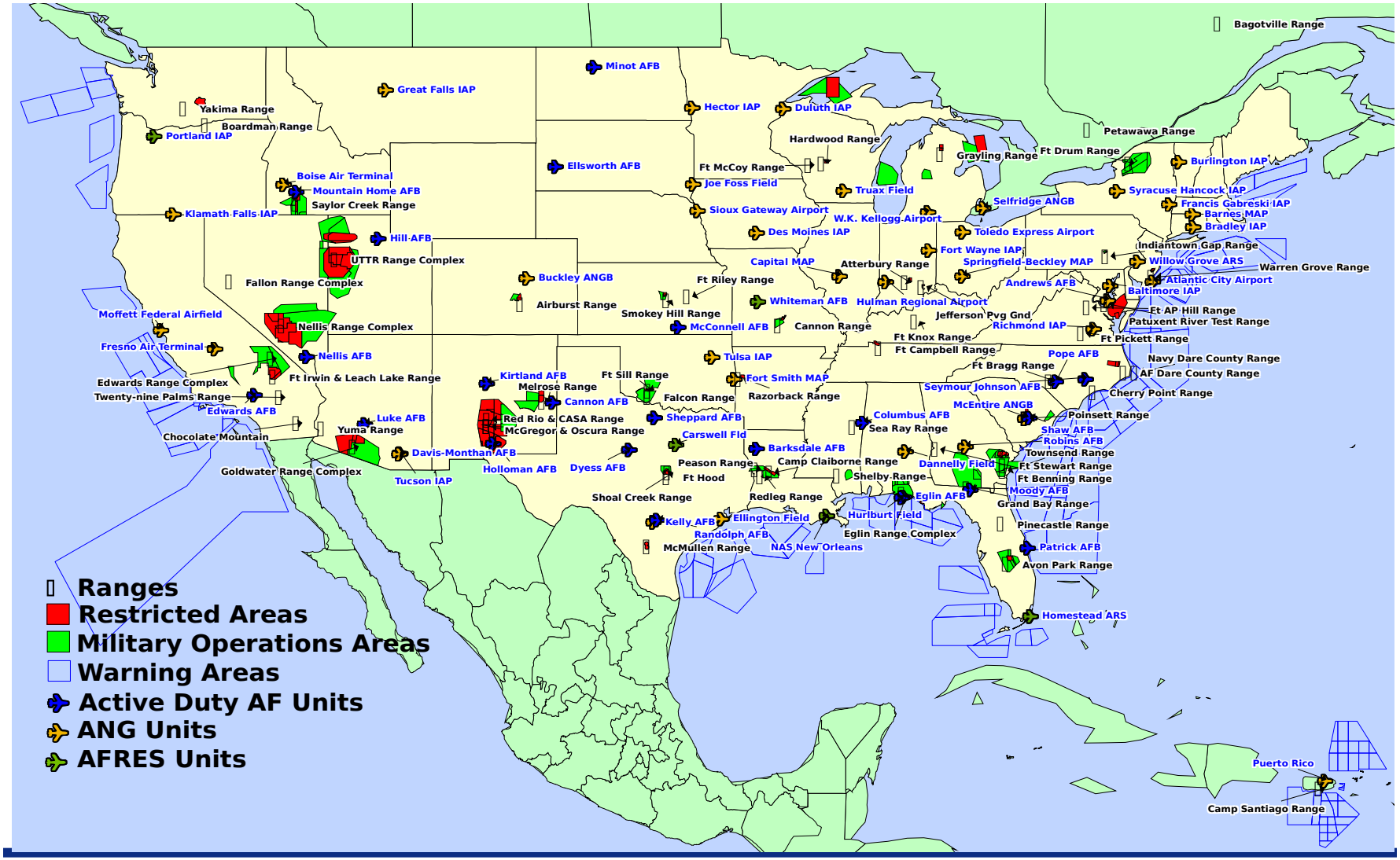
The Range Scope



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Ranges the Total Pictu

UXOs

Customers
ILE, AFCESA, MAJCOMs
Range Mgrs & Env Staff

- Range Maintenance/Residue Removal
- Noise
- Natural/Cultural Resources
- Chemical Residue Remediation
- Range Inventory Studies
- Environmental Impact Analysis
- Air Emissions
- Range Management Plans
- Encroachment

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The Issues

- Impact of Air-to-Ground Missions on Sensitive Wildlife and Cultural Resources Habitat
- Impact of Environmental Constraints on the AF mission
- Land-Use Compatibility
- UXO Reconnaissance and Sweeps Around Large Geographic Area
- Noise Impact to All Facets of the Environment

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Demonstrated Synergies (Forestry)

For instance, the timber program keeps track of their annual harvests and planting schedules using GIS maps and databases.

Demonstrated Synergies (Forestry)

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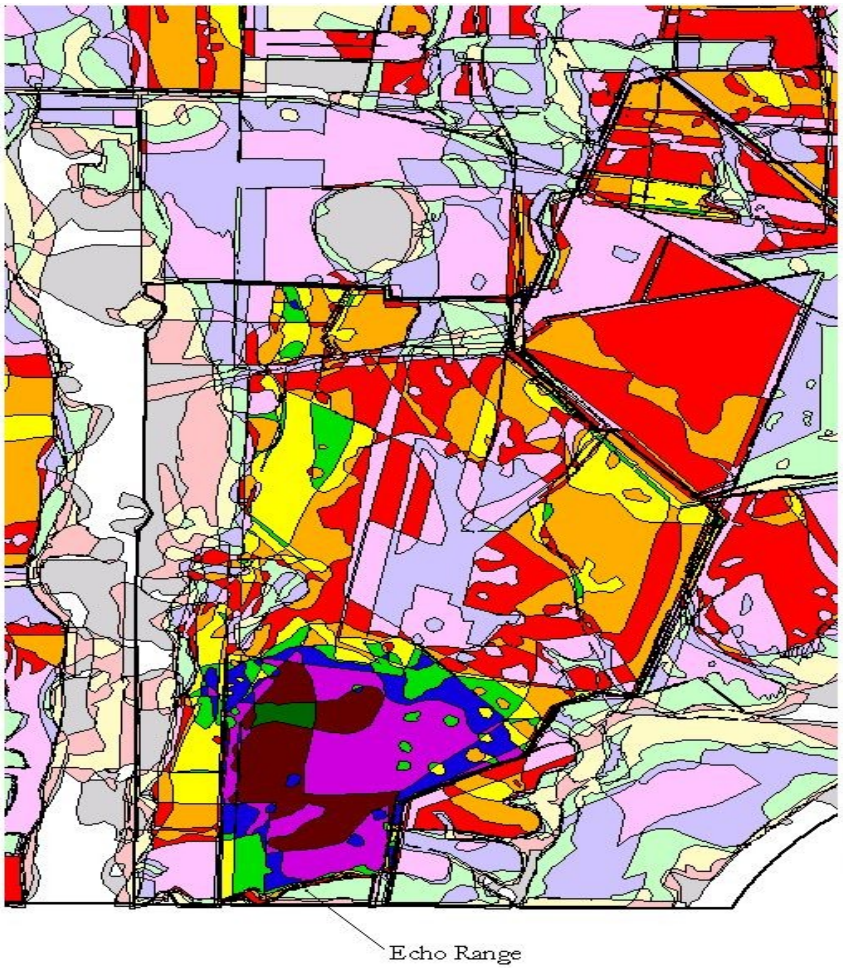


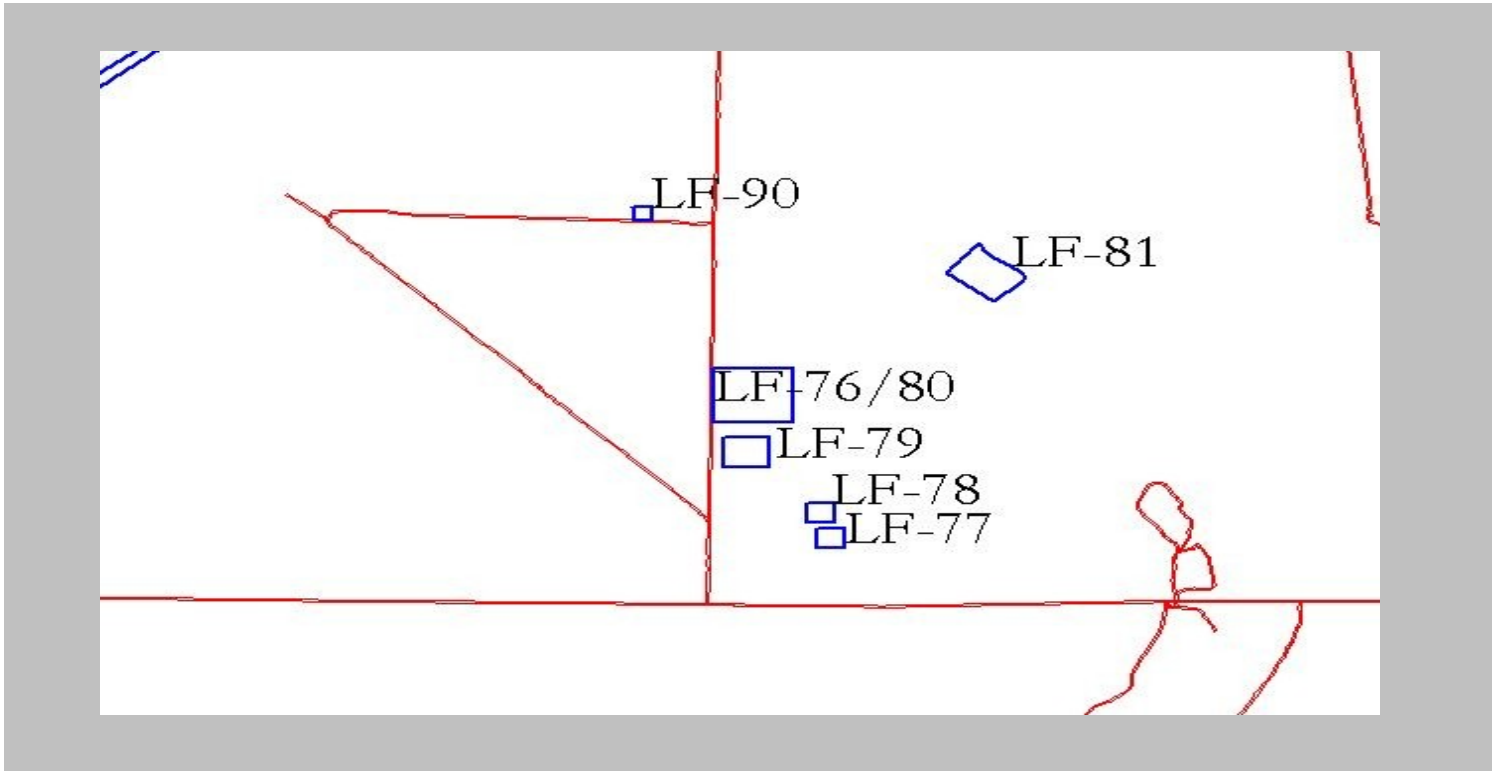
With so many years of burn data, we can examine how often areas of the Range have been burned. Areas with lighter colors have been burned less, and therefore may require more attention in the upcoming fire season. The very dark colors on Echo Range represent an area around the AC130 target, where ordnance sets off fires more often than any place else on the Range.

Demonstrated Synergies (Endangered Species)

Florida Scrub-jays frequently nest on the active ranges. A contractor comes in each week during nesting season to update the coverage of active nests so that they can be protected from fires started by air-to-ground

Locations of scrub-jay nests in Foxtro Range

Demonstrated Synergies (Remediation Efforts)



Locating the hazardous waste and remedial sites left from 55 years of military activity is difficult at the Range because of poor records and regenerated vegetation. The GIS lab helps the ERP program maintain locations of sites and monitoring wells when these sites are found.

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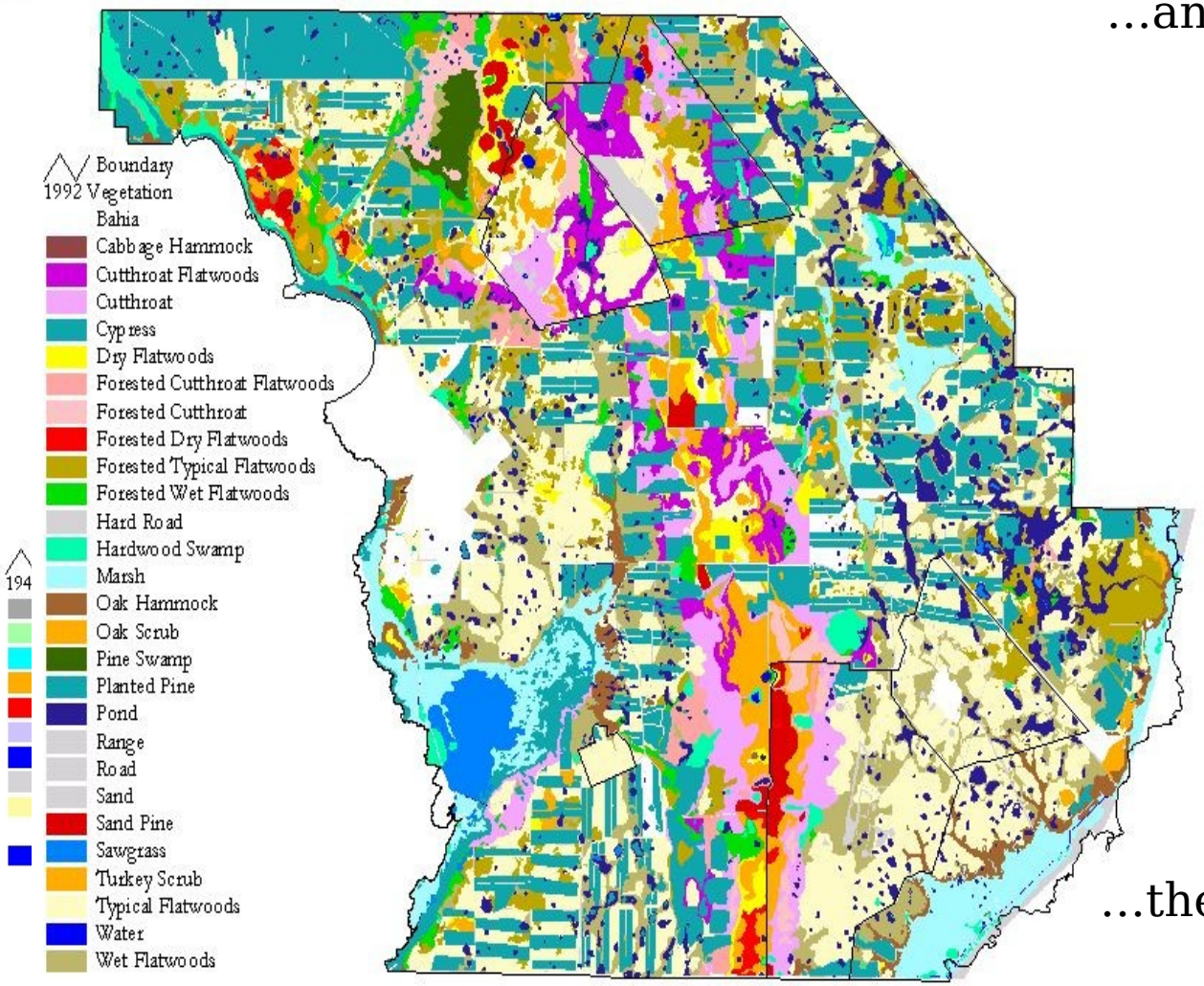
Demonstrated Synergies (The Changing Landscape)



In the long run, it is hoped to use the GIS for long-term monitoring of the changes in the landscape. Compare if you will, the vegetative communities of presettlement Florida...

...and the current pattern to

...the Range during World Wa

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Demonstrated Synergies (New Mission Integration)

The Range is adding three new targets known as Urban
Complex Targets. These need to be located where there are no wetlands in order to avoid violating national wetland statutes. We used the GIS to identify places where these targets could go, and whether they met all criteria for avoiding wetland disturbances.

In this picture, the buffers identified a hill on which we could safely place an Urban Target Complex.

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GOER© Concept: Integrated Databases

- GOER Integrates All System Databases:
  - UTC
  - Legal
  - Mission Profiles
  - GIS/NIMA
- Logic Analyzes and Sorts Data
- GOER© Generates Summary Checklist, Maps, Environmental Review Report, and Legal Report
- Decision Maker Considers GOER© Impacts Assessment During the Planning Phase

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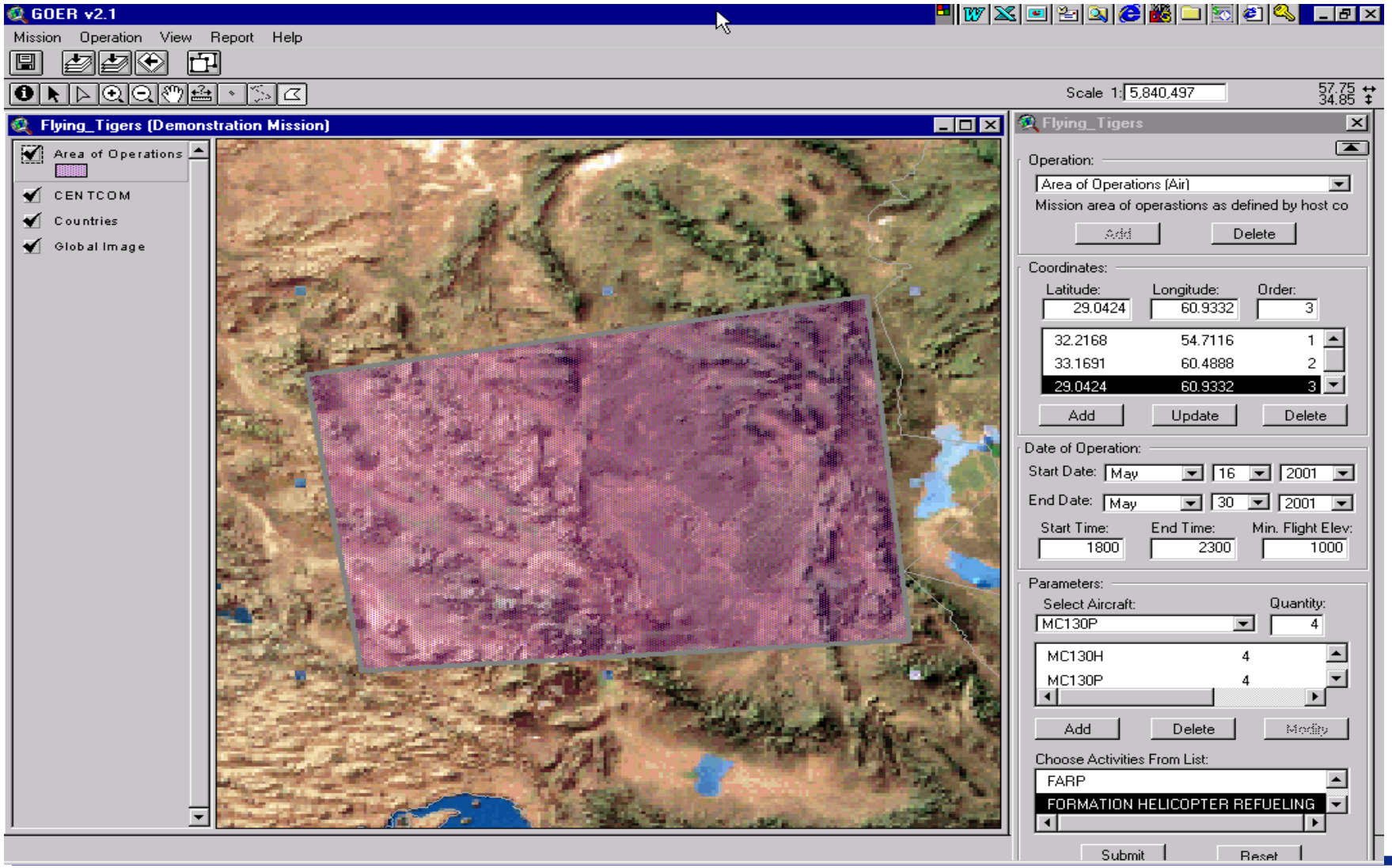
Example Inputs



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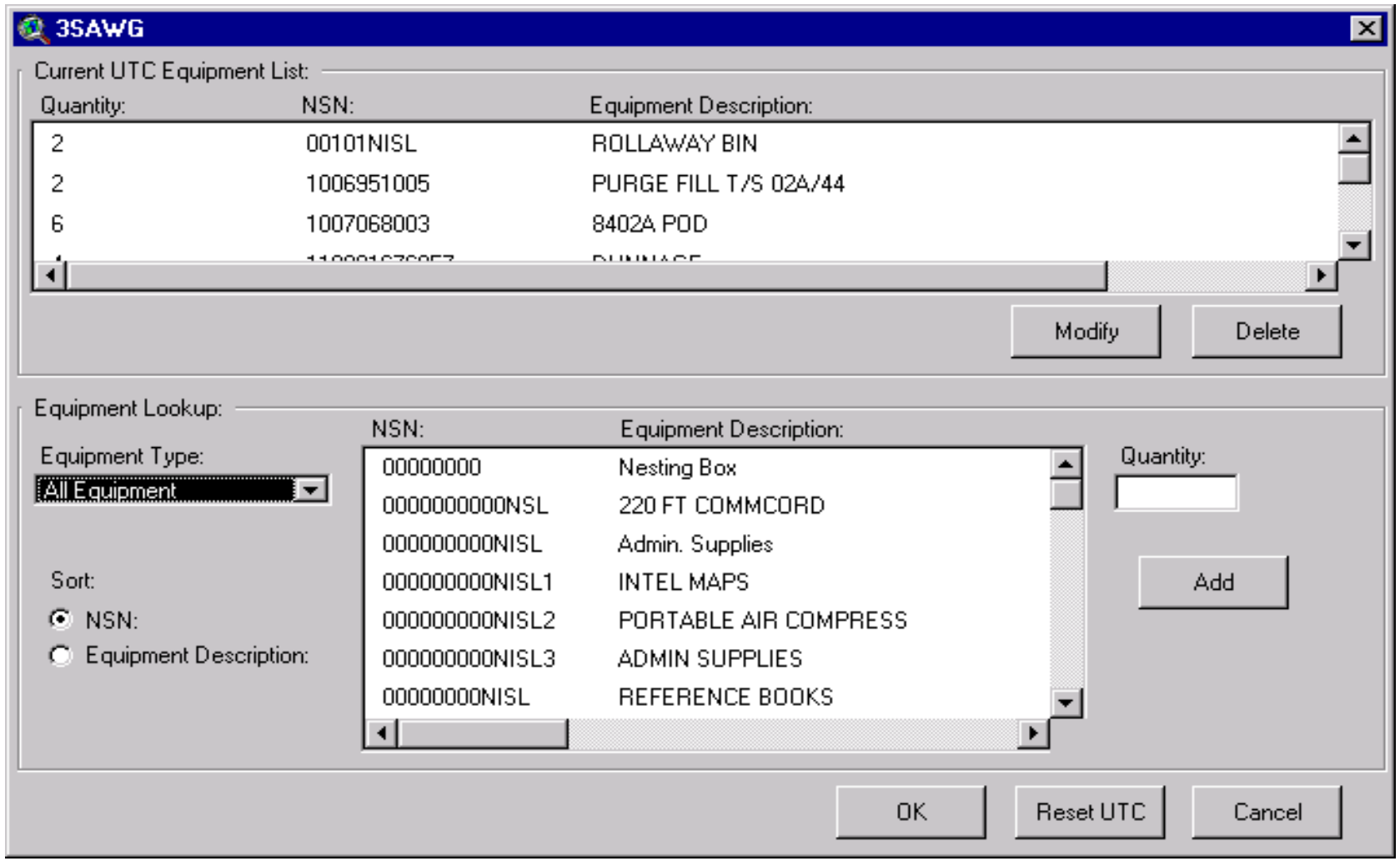
Tailor Equipment Lists to Meet Mission Needs



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Outputs: Summary Report

- Operational Planning Format that Provides
  Text and Maps/Charts
- Color Indicates Impact Severity:
  - No Impacts
  - Limited Impacts, Some Action required to Avoid or to Mitigate
  - Significant Impacts, See Environmental Professional
- Impacts Provided at the Operation-level
- Two Types of Analysis:
  - Mission and Operations on Environment
  - Environment on Mission and Operations

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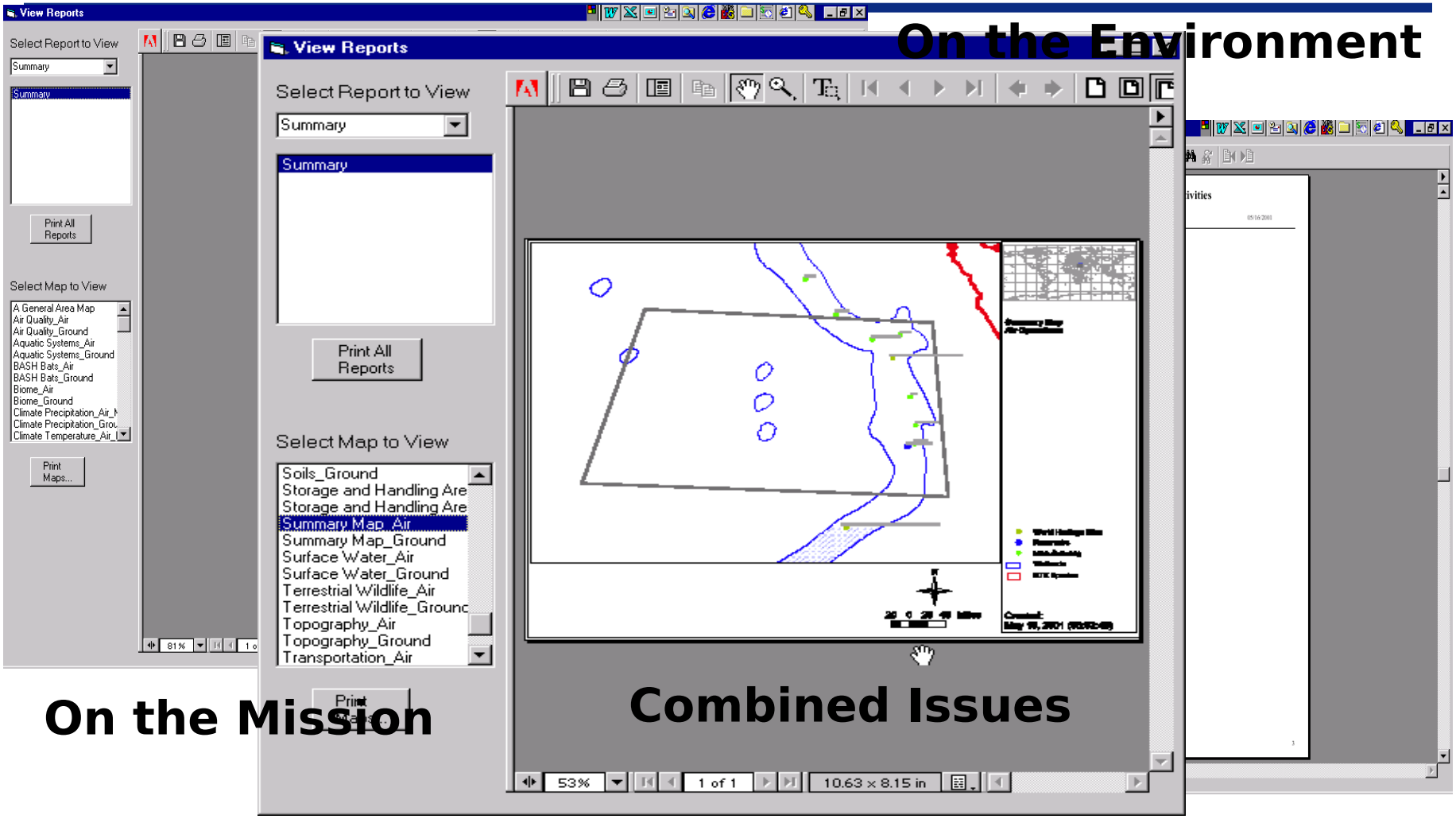
Impacts

On the Environment



On the Mission

Combined Issues

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Conclusions

- GeoBase provides situational awareness to Range managers
- Allows for greater exploitation of range data
- Allows for greater management and sustainment within current resources

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